AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A method of producing a reference image, comprising the steps of:

forming plural images by a CCD camera by imaging a plurality of glass bottles as samples, wherein said samples ~~may~~contain both non-defective bottles and defective glass bottles; and

producing a reference image from the obtained plural images, a range of brightness when light is applied to ~~a~~the non-defective glass bottle being specified in said reference image

2.   (Original) A method of producing a reference image according to claim 1, wherein said range of brightness specified in said reference image is determined by detecting brightness in each pixel in the images of plural non-defective glass bottles, and determining the maximum brightness and the minimum brightness in each pixel, wherein said range of brightness is between the maximum brightness and the minimum brightness.

3.(Original) A method of producing a reference image according to claim 1, wherein plural images are formed by imaging a glass bottle as one sample simultaneously by a plurality of CCD cameras from a plurality of imaging angles, wherein said reference image is produced for each predetermined angle.

4.   (Currently Amended) A method of producing a reference image according to claim 1 ~~further comprising the steps of~~ , wherein before producing said reference image,

removing images of defective glass bottles ~~are removed~~ from said plural images imaged by said CCD camera.~~s, and only the images of non-defective glass bottles are obtained~~

5.   (Original) A method of producing a reference image according to claim 4, wherein a frequency distribution of brightness of pixels located at the same pixel position in said plural images is obtained, an average value and standard deviation of brightness of said pixels are calculated, and when there is at least one pixel having brightness higher than said average value by a predetermined multiple of said standard deviation or more, an image having said at least one pixel is judged to be an image of a defective glass bottle and then removed.

6.   (Original) A method of producing a reference image according to claim 4, wherein a frequency distribution of brightness of pixels located at the same pixel position in said plural images is obtained, an average value and standard deviation of brightness of said pixels are calculated, and when there is at least one pixel having brightness lower than or equal to a value calculated by subtracting a predetermined multiple of said standard deviation from said average value, an image having said at least one pixel is judged to be an image of a defective glass bottle and then removed.

7.   (Original) A method of inspecting a glass bottle, wherein a defect at a specific part of a glass bottle is detected by comparing the reference image obtained by the method according to

claim 1, with an image which is formed by imaging with a CCD camera the glass bottle to be inspected.

8.   (Currently Amended) An apparatus for producing a reference image, comprising:

a CCD camera for forming plural images by imaging a plurality of glass bottles as samples which ~~may~~contain both non-defective bottles and defective glass bottles; and

an image processor for producing a reference image from the obtained plural images, a range of brightness when light is applied to a~~the~~ non-defective glass bottle being specified in said reference image.

9.   (Original) An apparatus for producing a reference image according to claim 8, wherein said range of brightness specified in said reference image is determined by detecting brightness in each pixel in the images of plural non-defective glass bottles, and determining the maximum brightness and the minimum brightness in each pixel, wherein said range of brightness is between the maximum brightness and the minimum brightness.

10.   (Original) An apparatus for producing a reference image according to claim 8, wherein plural images are formed by imaging a glass bottle as one sample simultaneously by a plurality of CCD cameras from a plurality of imaging angles, wherein said reference image is produced at each predetermined angle.

11.   (Original) An inspecting apparatus for detecting a defect of a glass bottle by imaging light from the glass bottle while the glass bottle is illuminated, and processing the obtained image, the inspecting apparatus comprising:

a lighting device disposed at a predetermined position with respect to the glass bottle;

a plurality of CCD cameras disposed around the glass bottle for imaging a specific part of the glass bottle; and

an image processor for processing the images obtained by said CCD cameras;

wherein said image processor detects a defect at a specific part of the glass bottle by comparing the reference image obtained by said apparatus according to claim 8, with an image formed by imaging the glass bottle to be inspected by said CCD camera.

12.   (New) A method of producing a reference image according to claim 4 further comprising the steps of,

obtaining only the images of non-defective glass bottle.